Datasheet for ABIN5710272

RPA1 Protein (AA 2-616) (His-SUMO Tag)

1 Image

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Overview

Quantity:	100 µg
Target:	RPA1
Protein Characteristics:	AA 2-616
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RPA1 protein is labelled with His-SUMO Tag.
Application:	SDS-PAGE (SDS)

Product Details

Sequence:	VGQLSEGAIA AIMQKGDTNI KPILQVINIR PITTGNSPPR YRLLMSDGLN TLSSFMLATQ LNPLVEEEQL SSNCVCQIHR FIVNTLKDGR RVVILMELEV LKSAEAVGVK IGNPVPYNEG LGQPQVAPPA PAASPAASSR PQPQNGSSGM GSTVSKAYGA SKTFGKAAGP SLSHTSGGTQ SKVVPIASLT PYQSKWTICA RVTNKSQIRT WSNSRGEGKL FSLELVDESG EIRATAFNEQ VDKFFPLIEV NKVYYFSKGT LKIANKQFTA VKNDYEMTFN NETSVMPCED DHHLPTVQFD FTGIDDLENK SKDSLVDIIG ICKSYEDATK ITVRSNNREV AKRNIYLMDT SGKVVTATLW GEDADKFDGS RQPVLAIKGA RVSDFGGRSL SVLSSSTIIA NPDIPEAYKL RGWFDAEGQA LDGVSISDLK SGGVGGSNTN WKTLYEVKSE NLGQGDKPDY FSSVATVVYL RKENCMYQAC PTQDCNKKVI DQQNGLYRCE KCDTEFPNFK YRMILSVNIA DFQENQWVTC FQESAEAILG QNAAYLGELK DKNEQAFEEV FQNANFRSFI FRVRVKVETY NDESRIKATV MDVKPVDYRE YGRRLVMSIR RSALM
Purification:	SDS-PAGE

Product Details

Purity:	> 90 %

Target Details

Target:	RPA1
Alternative Name:	RFA1 (RPA1 Products)
Background:	As part of the heterotrimeric replication protein A complex (RPA/RP-A), binds and stabilizes single-stranded DNA intermediates, that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage . In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response . It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage . Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair . Plays also a role in base excision repair (BER) probably through interaction with UNG . Through RFWD3 may activate CHEK1 and play a role in replication checkpoint control. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance . As part of the alternative replication protein A complex, aRPA, binds single-stranded DNA and probably plays a role in DNA repair. Compared to the RPA2-containing, canonical RPA complex, may not support chromosomal DNA replication and cell cycle progression through S-phase. The aRPA may not promote efficient priming by DNA polymerase alpha but could support DNA synthesis by polymerase delta in presence of PCNA and replication factor C (RFC), the dual incision/excision reaction of nucleotide excision repair and RAD51-dependent strand exchange
Molecular Weight:	84 kDa
UniProt:	P27694
Pathways:	Telomere Maintenance, DNA Damage Repair, Mitotic G1-G1/S Phases, DNA Replication, Chromatin Binding, Synthesis of DNA

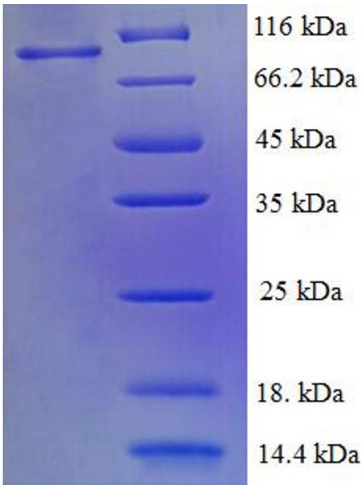
Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.1-2 mg/mL
Buffer:	20 mM Tris-HCl based buffer, pH 8.0
Storage:	-80 °C,4 °C,-20 °C
Storage Comment:	Store at -20°C, for extended storage, conserve at -20°C or -80°C. Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Images



SDS-PAGE

Image 1.